

Serial No.: 09/783,958
Atty. Docket No.: P64425US2

IN THE CLAIMS:

Please amend the claims as set forth herein:

Claims 1-32 (Canceled).

33. (Currently Amended) A method for manufacturing an electric energy storage device comprising the steps of:

forming an ionic conducting polymer electrolyte separator comprising i) preparing a common solvent for an electrolyte and for dissolving polymer, [[and]] ii) dissolving at least one polymer selected from the group consisting of polymer of polyacrylate series, polyvinylidene fluoride, copolymer of polyvinylidene fluoride and polymer of polyether series in said common solvent, and iii) heating a mixture of said common solvent and said polymer and coating said mixture on a current collector;

forming said separator on a first electrode, winding said first electrode at least half a revolution, and then winding said first electrode with a second electrode.

34. (Canceled).

35. (Original) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said common solvent is composed of propylene carbonate.

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36. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 35, wherein said common solvent comprises alkylammonium compounds including tetraethylammoniumtetrafluoroborate or amide compounds including tertiary amide.

37. (Original) The method for manufacturing an electric energy storage device as claimed in claim 35, wherein the step of dissolving said polymer is performed by homogeneously dispersing polyacrylonitrile and polyvinylidene fluoride in said common solvent.

38. (Original) The method for manufacturing an electric energy storage device as claimed in claim 35, wherein the step of dissolving said polymer is performed by homogeneously dispersing polymethylmethacrylate and polyacrylonitrile in said common solvent.

39. (Original) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said common solvent is composed of gamma-butyrolactone.

40. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 39, wherein said common solvent comprises alkylammonium compounds including tetraethylammoniumtetrafluoroborate or amide compounds including tertiary amide.

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41. (Original) The method for manufacturing an electric energy storage device as claimed in claim 39, wherein the step of dissolving said polymer is performed by homogeneously dispersing polyacrylonitrile in said common solvent.

42. (Original) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said common solvent is composed of propylene carbonate and gamma-butyrolactone.

43. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 42, wherein the step of preparing said common solvent further comprises a step of dissolving alkylammonium compounds including tetraethylammoniumtetrafluoroborate or amide compounds including tertiary amide.

44. (Original) The method for manufacturing an electric energy storage device as claimed in claim 42, wherein the step of dissolving said polymer is performed by homogeneously dispersing polyacrylonitrile and polyvinylidenefluoride or polyethylene oxide in said common solvent.

45. (Canceled).

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46. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said method further comprises a step of directly coating said separator on said first electrode.

47. (Original) The method for manufacturing an electric energy storage device as claimed in claim 46, wherein said first electrode is a cathode having an activated carbon coated thereon.

48. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said method further comprises a step of injecting an additional electrolyte that is different from said common solvent in said first electrode and said second electrode.

49. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said method further comprises a step of injecting an additional electrolyte that is identical to the common solvent of said separator in said first electrode and said second electrode.

50. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 33, wherein said first electrode is longer and wider than said second electrode.

Claims 51-54 (Canceled).

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55. (Currently Amended) A method for manufacturing an electric energy storage device comprising the steps of:

forming an ionic conducting polymer electrolyte separator comprising i) preparing a common solvent for an electrolyte and for dissolving polymer and ii) dissolving at least one polymer selected from the group consisting of polymer of polyacrylate series, polyvinylidene fluoride, copolymer of polyvinylidene fluoride and polymer of polyether series in said common solvent;

forming directly coating said separator on a first electrode and then winding said first electrode with a second electrode by winding said first electrode more than said second electrode; ~~said first electrode being longer and wider than said second electrode.~~

56. (Currently Amended) The method for manufacturing an electric energy storage device as claimed in claim 55, wherein said first electrode is longer and wider than said second electrode ~~method further comprises a step of directly coating said separator on said first electrode.~~

57. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 55, wherein said method further comprises a step of injecting an additional electrolyte that is different from said common solvent in said first electrode and said second electrode.

58. (Currently Amended) A method for manufacturing an electric energy storage device comprising the steps of:

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forming an ionic conducting polymer electrolyte separator comprising i) preparing a common solvent for an electrolyte and for dissolving polymer and ii) dissolving at least one polymer selected from the group consisting of polymer of polyacrylate series, polyvinylidene fluoride, copolymer of polyvinylidene fluoride and polymer of polyether series in said common solvent;

forming directly coating said separator on a first electrode, forming an isolating means on an end portion of said first electrode, and winding said first electrode with a second electrode.

59. (Canceled).

60. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 58, wherein said method further comprises a step of injecting an additional electrolyte that is different from said common solvent in said first electrode and said second electrode.

61. (Previously Presented) The method for manufacturing an electric energy storage device as claimed in claim 58, wherein said isolating means is composed of a tape or a paper.

62. (New) A method for manufacturing an electric energy storage device comprising the steps of:

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forming an ionic conducting polymer electrolyte separator comprising i) preparing a common solvent for an electrolyte and for dissolving polymer and ii) dissolving at least one polymer selected from the group consisting of polymer of polyacrylate series, polyvinylidene fluoride, copolymer of polyvinylidene fluoride and polymer of polyether series in said common solvent;

directly coating said separator on a first electrode, winding said first electrode at least half a revolution, and then winding said first electrode with a second electrode.

63. (New) A method for manufacturing an electric energy storage device comprising the steps of:

forming an ionic conducting polymer electrolyte separator comprising i) preparing a common solvent for an electrolyte and for dissolving polymer and ii) dissolving at least one polymer selected from the group consisting of polymer of polyacrylate series, polyvinylidene fluoride, copolymer of polyvinylidene fluoride and polymer of polyether series in said common solvent;

forming said separator on a first electrode and then winding said first electrode with a second electrode by winding said first electrode more than said second electrode; and

injecting an additional electrolyte that is different from said common solvent in said first electrode and said second electrode.

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64. (New) The method for manufacturing an electric energy storage device as claimed in claim 63, wherein said winding includes winding said first electrode at least half a revolution, and then winding said first electrode with said second electrode.

65. (New) A method for manufacturing an electric energy storage device comprising the steps of:

forming an ionic conducting polymer electrolyte separator comprising i) preparing a common solvent for an electrolyte and for dissolving polymer and ii) dissolving at least one polymer selected from the group consisting of polymer of polyacrylate series, polyvinylidene fluoride, copolymer of polyvinylidene fluoride and polymer of polyether series in said common solvent;

forming said separator on a first electrode, forming an isolating means on an end portion of said first electrode, and winding said first electrode with a second electrode; and

injecting an additional electrolyte that is different from said common solvent in said first electrode and said second electrode.